

INTERNATIONAL SEARCH REPORT

Internat. Application No.
PCT/US 03/03132

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A47L5/28 A47L9/22 A47L9/12 A47L9/30 A47L9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A47L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category ^o	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 141 822 A (JIMENEZ ANTONIO ET AL) 7 November 2000 (2000-11-07)	1,2,4, 13,15, 18,19, 26-30,32
Y	column 3, line 19 -column 6, line 19; figures 1,4-6,8 ---	5,6, 10-12
X	EP 1 129 657 A (MATSUSHITA ELECTRIC IND CO LTD) 5 September 2001 (2001-09-05)	1-3,13, 18,19, 21, 27-29,32
Y	column 4, paragraph 7 -column 6, paragraph 13 column 8, paragraph 21 column 10, paragraph 27; figures 1-4,19-24 ---	5,6, 10-12 -/-

 Further documents are listed in the continuation of box O. Patent family members are listed in annex.

o Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the International search

23 October 2003

Date of mailing of the International search report

03/11/2003

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

Internat pplication No
PCT/US J3/03132

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 1 310 618 A (GOURMELON AIME) 30 November 1962 (1962-11-30)	1,2,18, 19, 26-30,32
Y	the whole document	5,6, 10-12
Y	US 2 686 330 A (WALES NATHANIEL B) 17 August 1954 (1954-08-17) column 1, line 1 - line 26 column 3, line 48 -column 4, line 51; figures 1-4,7 ---	5,6, 10-12
A	US 2 550 384 A (SENNE EDGAR P) 24 April 1951 (1951-04-24) the whole document	1-30,32
A	FR 1 333 087 A (ELECTROSTAR G M B H) 19 July 1963 (1963-07-19) the whole document	1-30,32
A	GB 568 958 A (GEN ELECTRIC CO LTD;FRANK HARVEY; THOMAS JOSEPH CURTIS) 27 April 1945 (1945-04-27) the whole document	1-30,32

INTERNATIONAL SEARCH REPORT

International Application No. PCT/GB 03 03132

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 31

Present claim 31 lacks clarity (Article 6 PCT). An attempt is made to define the subject-matter by reference to the drawings. All the claims should specify clearly all of the essential features needed to define the invention. Consequently, the search has been carried out for those parts of the claims which appears to be clear, supported and disclosed.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Inte al application No.
/GB 03/03132

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: 31 because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
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			JP	2002177171 A	25-06-2002	
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			EP	1129657 A1	05-09-2001	
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US 2550384	A	24-04-1951	NONE			
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GB 568958	A	27-04-1945	NONE			